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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/552,445 | 10/06/2005 | Akira Sakawaki | Q75081 | 2287 |
| 23373 | 7590 | 06/19/2007 | EXAMINER | |
| SUGHRUE MION, PLLC | | | BERNATZ, KEVIN M | |
| 2100 PENNSYLVANIA AVENUE, N.W. | | | | |
| SUITE 800 | | | ART UNIT | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/552,445 | SAKAWAKI ET AL. |
| | Examiner | Art Unit |
| | Kevin M. Bernatz | 1773 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-10,12,13,18,21,22,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3-10,12,13,18,21,22,25 and 26 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/9/07;5/22/07.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendments to the specification and claims 1, 3 – 10, 12, 13, 18, 21, 22, 25 and 26 and cancellation of claims 2, 11, 14 – 17, 19, 20, 23 and 24, filed on April 13, 2004, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Examiner's Comments

3. Regarding the limitation(s) "upper" and "lower" in claim 1, the Examiner has given the term(s) the broadest reasonable interpretation(s) consistent with the written description in Applicants' specification as it would be interpreted by one of ordinary skill in the art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Donaldson Co., Inc.*, 16 F.3d 1190, 1192-95, 29 USPQ2d 1845, 1848-50 (Fed. Cir. 1994). See MPEP 2111. Specifically, the Examiner has interpreted these claims as being relative to the substrate. I.e. the "lower" layer is closer to the substrate than the "upper" layer.
4. The Examiner acknowledges receipt of the return post card indicating the proper filing of the English language specification of the provisional application. However, the Examiner notes that the paper appears to have been misplaced and/or incorrectly matched with the provisional application. As such, the Examiner respectfully requests

that Applicants resubmit the verified English language translation, clearly stating that it is a replacement copy to replace the misplaced original. Applicants are also asked to include a copy of the return postcard when filing the replacement copy in the provisional application.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 3 – 10, 12, 13, 18, 21, 22, 25 and 26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 18 of U.S. Patent No. 7,132,176 B2 for the reasons of record as set forth in Paragraph No. 5 of the Office Action mailed on January 8, 2007.

Claim Rejections - 35 USC § 102

7. Claims 1, 3- 10, 12, 13, 18, 21, 22, 25 and 26 are rejected under 35 U.S.C. 102(a), (b), and/or (e) as being anticipated by Kikitsu et al. (U.S. Patent App. No. 2001/0051287 A1) - ***and/or -***

Claims 1, 3- 10, 12, 13, 18, 21, 22, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kikitsu et al. (U.S. Patent No. 6,830,824 B2).

Both rejections are maintained for the reasons of record as set forth in Paragraph No. 9 of the Office Action mailed on January 8, 2007.

Regarding the amended language of claim 1, the Examiner notes that Applicants amendment is essentially the incorporation of the subject matter of claims 2, 11 and 15 into claim 1. As noted in Paragraph No. 9 of the Office Action mailed January 8, 2007, Kikitsu et al. discloses the claimed limitations relating to prior claims 2, 11 and 15.

Claim Rejections - 35 USC § 103

8. Claims 1, 3 – 10, 12, 13, 18, 21, 22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikitsu et al. (either reference) as applied above.

Kikitsu et al. is relied upon as described above.

While the Examiner maintains that Kikitsu et al. provides sufficient disclosure to anticipate the claimed limitations, the Examiner acknowledges that the combined teachings are found in two examples. See Figure 1, below.

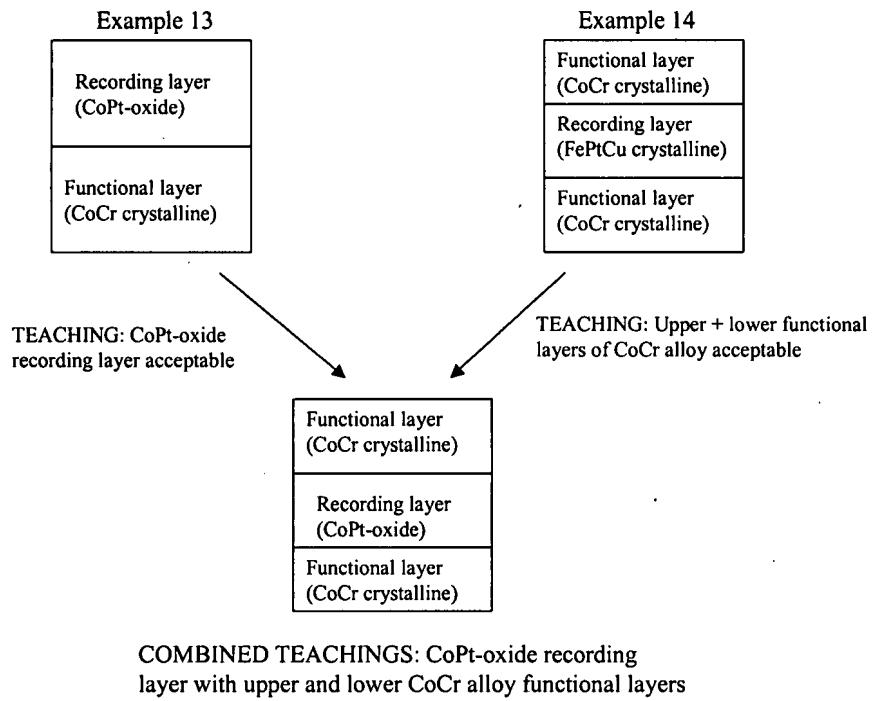


Figure !: Illustration of how combined teachings reads on claimed invention

The Examiner notes that Kikitsu et al. clearly teach using CoPt-oxide based recording layers meeting Applicants' claimed limitations as suitable for the disclosed magnetic recording (e.g. see at least Examples 1 – 6, 8 and 13), CoCr functional layers containing no oxygen (e.g. see at least Examples 11 – 16), as well as the use of functional layers both above and below the recording layer (col. 43, lines 15 – 26 and at least example 14). As such, the Examiner deems that one of ordinary skill in the art would have readily appreciated that substituting a CoPt-oxide based recording layer into, for example, the structure of Example 14 would have merely been a substitution of functional equivalent recording layer materials (i.e. replacing the FePtCu recording layer

with the CoPt-SiO₂ recording layer taught in the immediately preceding example with substantially identical CoCr functional layers).

Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. In the instant case, FePtCu recording layers and CoPt-SiO₂ recording layers are functional equivalents in the field of magnetic recording layers, as exemplified by their disclosed use in the Kikitsu et al. examples (*and see Kikitsu et al., col. 8, line 49 bridging col. 9, line 30*). *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

The remaining claim limitations are met for the reasons of record as set forth in Paragraph No. 9 of the Office Action mailed January 8, 2007.

9. Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikitsu et al. as applied above in Paragraph 7, and further in view of Usuki et al. (U.S. Patent App. No. 2003/0134151 A1).

Kikitsu et al. is relied upon as described above.

Usuki et al. is relied upon for the reasons of record as set forth in Paragraph No. 11 of the Office Action mailed on January 8, 2007.

10. Claims 5 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikitsu et al. as applied above in Paragraph 8, and further in view of Usuki et al. ('151 A1).

Kikitsu et al. is relied upon as described above.

Usuki et al. is relied upon for the reasons of record as set forth in Paragraph No. 11 of the Office Action mailed on January 8, 2007.

Response to Arguments

11. The Double Patenting rejection of claims 1, 3 – 10, 12, 13, 18, 21, 22, 25 and 26 in view of U.S. '176 B2

Applicant(s) argue(s) that “[n]one of the claims of the '176 patent recite an orientation-controlling layer” (*page 9 of response*). The Examiner respectfully disagrees.

The Examiner notes that claim 9 clearly recites the inclusion of a nonmagnetic underlayer. The limitation “orientation-controlling” is merely nomenclature for the nonmagnetic underlayer used by Applicants.

Applicants further argue that none of the claims of the '176 patent recite the structure of the lower magnetic layer and/or whether the upper layer is “epitaxially grown” on the lower layer (*pages 9 – 10 of response*). The Examiner respectfully disagrees.

As noted in the rejection of record, the specification of the '176 B2 patent can be used to determine whether copending claims are directed to an obvious variation of the

disclosed invention. Specifically, while it is generally prohibited from using the disclosure of a potentially conflicting patent or application in an Double Patenting analysis, there are two exceptions permitted by the MPEP. Specifically, “those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent”. In the instant case, given that the ‘176 patent claims are specifically addressing the magnetic layers of the recording medium, the Examiner deems that the portions of the specification discussing appropriate crystal structure to be used for the magnetic layers is clearly providing support to the patent claims as a whole.

Finally, the Examiner notes that the term “epitaxially grown” has been given a much broader interpretation by the Examiner than it appears that Applicants’ are arguing. Specifically, the Examiner has taken “epitaxially grown” to merely require that both layers are crystalline. The layers need not be directly adjacent, nor directly correlated in any manner.

12. The rejection of claims 1, 3 – 10, 12, 13, 18, 21, 22, 25 and 26 under 35 U.S.C § 102(a), (b) and/or (e) and/or 103(a) – Kikitsu et al., alone or in view of Usuki et al.

Applicant(s) argue(s) that Kikitsu et al. fail to disclose epitaxially grown magnetic layers, nor a structure meeting the claimed limitations in a single embodiment (*pages 12 – 13 of response*). The Examiner respectfully disagrees.

See above with regard to Applicants' argument regarding "epitaxially grown".

With regard to the structure, the Examiner acknowledges that Kikitsu et al. fails to explicitly disclose a single embodiment meeting all of the claimed limitations. However, Applicant(s) are reminded that "the test for obviousness is not whether features of the secondary reference may be bodily incorporated into the primary reference's structure, nor whether the claimed invention is expressly suggested in any one or all of the references, rather the test is what the combined teachings would have suggested to those of ordinary skill in the art." *Ex parte Martin* 215 USPQ 543, 544 (PO BdPatApp 1981).

With regard to Applicants' argument that Kikitsu et al. fail to disclose a functional layer possessing a columnar structure, the Examiner respectfully notes that Applicants' argument is moot since the claims require that the *oxide* layer possess columnar crystals, which is the recording layer in Kikitsu et al. (see *Figure I, above*).

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

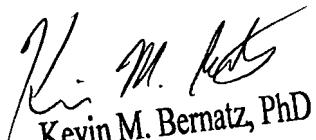
Applicants' amendment resulted in embodiments not previously considered (i.e. the combined limitations of claims 1, 2, 11 and 15) which necessitated the new grounds of rejection, and hence the finality of this action.

14. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kevin M. Bernatz whose telephone number is (571) 272-1505. The Examiner can normally be reached on M-F, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
June 5, 2007


Kevin M. Bernatz, PhD
Primary Examiner